

1 I claim:

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3 1. A method of streaming a panorama from a server to a client, wherein a user can only  
4 see the portion of the panorama in a view window and the user can move the location of the  
5 view window in the panorama, said method comprising the steps of  
6 dividing the panorama into slices,  
7 transmitting from the server to the client slices of said panorama that contain the view  
8 window plus a guard band surrounding the view window,  
9 transmitting from the client to the server instructions to change the location of said guard  
10 band as said user moves said view window.

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12 2. The method recited in claim 1 wherein said slices are the slices defined in the MPEG  
13 standard.

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15 3. The method recited in claim 1 where the streaming from the server to the client is  
16 handled by a streaming server and a plug-in to said server provides the slices in said guard  
17 band.

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19 4. The method recited in claim 1 where the client and the server are located on the same  
20 physical machine.

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22 5. The method of streaming data relative to a series of panoramic images from a server to  
23 a client, whereby a view window of said client can be displayed to a user, said method  
24 comprising the steps of:  
25 dividing each of said panoramic images into areas,  
26 streaming a plurality of said areas from each area from said server to said client, said  
27 plurality of areas including said view window and a guard band around said view window,  
28 displaying said view window portion of said panorama at said client,  
29 accepting user directions to change the location of said view window,  
30 sending commands to said server to change said plurality of areas being streamed to said  
31 server when said view window is changed more than a threshold amount, and  
32 changing the areas streamed from said server to said client in response to said commands.

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6. The method recited in claim 5 wherein said areas are MPEG slices.
7. The method recited in claim 5 wherein said server is a Real Networks server.
8. The method recited in claim 5 wherein said panorama is displayed to said user in a perspective correct manner.
9. The method recited in claim 5 wherein said server simultaneously streams portions of different panoramas to different clients.
10. The method recited in claim 5 wherein said server and said client are on the same physical machine.
11. A system for transmitting panoramic images from a server to a client,  
means at said server for dividing each panorama into areas, a plurality of said areas forming a region of interest of said panorama, said region of interest including a view window and a guard band around said view window,  
means for transmitting a region of interest from each panorama in a series of panoramas from said server to said client,  
means at said client for moving the location of said view window in said panorama,  
means for transmitting from said client to said server commands to change the location of said region of interest, and  
means at said server for changing the location of said region of interest which is streamed to said client.
12. The system recited in claim 11 where each of said areas comprise a plurality of MPEG slices.
13. The system recited in claim 12 wherein said server simultaneously streams portions of different panoramas to different clients.

1 14. The system recited in claim 12 wherein said server and said client are on the same  
2 physical machine.

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4 15. The system recited in claim 12 wherein all said means are physically located on one  
5 physical system.

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7 16. A system for allowing a series of panoramic images stored at a server to be viewed by  
8 a user at a client, said system including,  
9 a streaming server at said server for streaming data to said client,  
10 a program at said server for providing said streaming server with an area of interest from  
11 each panorama to be streamed to said client, said area of interest including a view window  
12 and a guard band around said view window, and  
13 a program at said client for receiving said data and for selecting the data representing said  
14 view window and for displaying said view window to said user.

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16 17. The system recited in claim 16 including a user input device whereby said user can  
17 move said view window in said area of interest, and a communication path from said client  
18 to said server whereby said client can instruct said server to change the location of said  
19 view window.

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21 18. The system recited in claim 17 wherein said user input device is a computer mouse.

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23 19. The system recited in claim 15 wherein said panoramic images are stored at said  
24 server using MPEG compression forming "I" and "B" or "P" frames.

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26 20. The system recited in claim 19 wherein the region of interest from "I" frames and entire  
27 "B" or "P" frames are transmitted from said server to said client.